

WHAT IS CLAIMED IS:

1. A vehicle body structure comprising:
a center pillar extending in a generally vertical direction of the vehicle body structure;
5 a roof side rail fixedly coupled to the center pillar, the roof side rail including a generally longitudinal axis extending in a front to aft direction of the vehicle body structure, a sliding door pocket structure projecting inwardly of the longitudinal axis of the roof side rail to form a front roller receiving recess for a sliding door; and
a reinforcement member coupled to the roof side rail, the reinforcement member
10 having a first section extending along the longitudinal axis of the roof side rail to one side of the center pillar, and a second section extending inwardly from the first section at a predetermined angle such that the second section overlies the sliding door pocket structure.
2. The vehicle body structure according to claim 1, wherein
15 the center pillar has a minimum width section defining a minimum front to aft width of the center pillar that is located such that a majority of the minimum front to aft width of the center pillar overlaps with the first section of the reinforcement member in the front to aft direction of the vehicle body structure.
- 20 3. The vehicle body structure according to claim 1, wherein
the first section of the reinforcement member extends in a front to aft location such that the first section is partially located in front of and in rearwardly of a minimum front to aft width of the center pillar.
- 25 4. The vehicle body structure according to claim 1, wherein
the first section of the reinforcement member extends in a forward direction relative to the center pillar.
- 30 5. The vehicle body structure according to claim 1, wherein
the sliding door pocket structure has a front section that is disposed at a front to aft location corresponding to an upper end of the center pillar.

6. The vehicle body structure according to claim 1, wherein the roof side rail includes a front side rail portion extending forwardly of the center pillar with the front rail portion having a substantially closed tubular cross section.

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7. The vehicle body structure according to claim 6, wherein the first section of the reinforcement member is disposed inside the substantially closed tubular cross section of the roof side rail.

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8. The vehicle body structure according to claim 7, wherein the front rail portion of the roof side rail includes inner and outer side rail parts that are joined to form the substantially closed tubular cross section of the front rail portion of the roof side rail.

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9. The vehicle body structure according to claim 8, wherein the center pillar includes inner and outer center pillar parts with an upper end of the inner center pillar part lying on an interior side of the reinforcement member and an upper end of the outer center pillar part lying on an exterior side of the reinforcement member.

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10. The vehicle body structure according to claim 8, wherein the inner and outer side rail parts are secured together along longitudinally extending edges and the first section of the reinforcement member is secured to the longitudinally extending edges of the inner and outer side rail parts.

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11. The vehicle body structure according to claim 10, wherein the inner and outer side rail parts are secured together along longitudinally extending edges and the first section of the reinforcement member includes a mounting tab that is secured between at least a pair of the longitudinally extending edges of the inner and outer side rail parts.

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12. The vehicle body structure according to claim 1, wherein the center pillar includes inner and outer center pillar parts that are coupled to together.

5 13. The vehicle body structure according to claim 12, wherein an upper end of the inner center pillar part lies on an interior side of the reinforcement member and an upper end of the outer center pillar part lies on an exterior side of the reinforcement member.

10 14. The vehicle body structure according to claim 1, wherein the sliding door pocket structure includes a base section and an arch-shaped wall section extending generally upwardly from the base section relative to the vehicle body structure such that the arch-shaped wall section forms a concaved exteriorly facing surface.

15 15. The vehicle body structure according to claim 14, wherein a forward end of the arch-shaped wall section is located at a first front to aft location near the center pillar and a rearward end of the arch-shaped wall section is located at a second front to aft location that is longitudinally spaced from the first front to aft location.

20 16. The vehicle body structure according to claim 15, wherein the first front to aft location of the forward end of the arch-shaped wall section is located adjacent a front to aft center point of the center pillar location.

25 17. The vehicle body structure according to claim 14, further comprising an upper plate section disposed at an upper edge of the arch-shaped wall section such the upper plate section is vertically spaced from the base section that is disposed at a lower edge of the arch-shaped wall section.

18 The vehicle body structure according to claim 1, wherein
the first section of the reinforcement member includes at least a pair of
longitudinally extending walls that have an L-shaped transverse cross sectional profile.

5 19 The vehicle body structure according to claim 1, wherein
the second section of the reinforcement member includes at least a pair of
longitudinally extending walls that have an L-shaped transverse cross sectional profile.

20. The vehicle body structure according to claim 19, wherein
10 the sliding door pocket structure includes a base section and an arch-shaped wall
section extending generally upwardly from the base section relative to the vehicle body
structure such that the arch-shaped wall section forms a concaved exteriorly facing surface,
and
the second section of the reinforcement member overlies at least a portion of the
15 arch-shaped wall section of the sliding door pocket structure.

21. The vehicle body structure according to claim 20, wherein
the second section of the reinforcement member further overlies at least a portion
of the base section of the sliding door pocket structure.

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22. A vehicle body structure comprising:
a center pillar extending in a generally vertical direction of the vehicle body
structure;
a roof side rail fixedly coupled to the center pillar, the roof side rail including a
25 generally longitudinal axis extending in a front to aft direction of the vehicle body
structure, a sliding door pocket structure projecting inwardly of the longitudinal axis of the
roof side rail to form a front roller receiving recess for a sliding door; and
reinforcement means for reinforcing the roof side rail to minimize rotation of the
roof side rail about the longitudinal axis of the roof side rail upon application of a inward
30 direction force on the center pillar.